

Art Unit: 2851

DETAILED ACTION

Continued Prosecution Application

1. The request filed on 7/19/2000 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/145,982 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Rejections - 35 U.S.C. § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 4, the recitation of "the gas containing substantially no water content" is vague and indefinite since when a term of degree is used as a limitation, it is necessary to determine whether the specification provides some standard for measuring that degree. In this case, the specification does not enable one skilled in the art to reasonably establish what may be construed as being within the metes and bounds of the term of degree. Therefore, one of ordinary skill in the art would not be apprised as to the claimed invention's scope when the claims are read in light of the specification.

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Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

5. Claims 1-5, 11-12 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishi et al (U.S.Pat. 5,883,704).

As to claims 1-5, 11-12 and 15 Nishi et al (fig.1-2, and 47) disclose an exposure system comprising all of the structures set forth in the instant claims such as: a laser light source (see col.52, line 58) for illuminating a reticle; a projection optical system for projecting an image formed on a reticle onto a substrate (see fig.47) and gas purging means for replacing the spaces (533, 535) containing the optical elements by nitrogen gas which "does not absorb the ArF excimer laser light and prevents the production of the impurity such as fog due to the laser energy" (see col.54, lines 25-29) and "it is not preferable that air including oxygen is used" (see col.51 lines 12-13).

Claim Rejections - 35 U.S.C. § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 11-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanimoto et al (U.S.Pat. 4,690,528).

With regard to claims 1-5, 11-12 and 15, Tanimoto et al (fig.1 and 7) disclose an exposure apparatus comprising substantially all of the limitations of the invention as claimed. (see abstract and fig.1, 7 and 8 of Tanimoto).

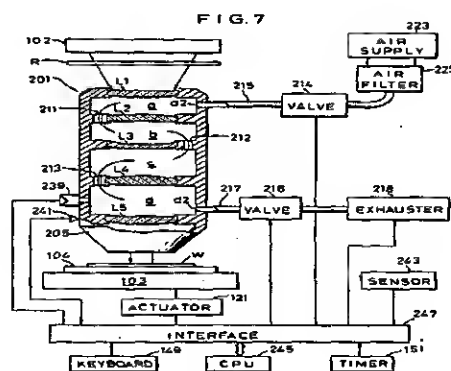


Fig.7 of Tanimoto.

Tanimoto does not expressly disclose a dry gas being supplied to spaces between the optical element of the projection lens. However, on column 7, lines 52-55, Tanimoto notes that "gas from a high pressure gas container may be used... or solidified gas may be used after transforming it again to normal gas and *adjusting the temperature* of it to a desired valued". This provide a clear suggestion that it would have been obvious to a skilled artisan to supply a dry gas to the

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spaces between optical components for the purpose of preventing the production of an oxidization reaction and thereby preventing the smudge of the pattern surface.

Allowable Subject Matter

8. Claims 6-7, 9, 14, 16-18 are allowed.

Response to Amendment

9. Applicant's amendment filed June 19, 2000 have been entered and carefully reviewed. Claims 1, 6, 14-16 and 18 are amended. Claim 10 is cancelled. In light of applicant's remarks and upon reference to the identified passage in the specification, the objection to the drawings are withdrawn. Applicant's amendment is sufficient in overcoming the rejection of claims 6, 7 and 16 under 35 U.S.C. 112 first and second paragraphs.

Turning to the art rejection, the applicant's arguments have been carefully considered and have been traversed since the limitations of the claims 1-5, 10-12 and 15 are still read on the references of Tanimoto et al and Nishi et al as set forth above.

10. Any inquiry concerning this application or earlier communications from the examiner should be directed to Henry Nguyen whose telephone number is (703) 305-6462.

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Any inquiry of a general nature or relating the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

hvn 8/16/2000


Russell Adams
Primary Examiner

Office Action Summary

Application No.
09/145,982

Applicant(s)

Hase

Examiner
Nguyen, Hung Henry

Group Art Unit
2851



☒ Responsive to communication(s) filed on CPA filed July 19, 2000

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-7, 9, 11, 12, and 14-18 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 6, 7, 9, 14, and 16-18 is/are allowed.

☒ Claim(s) 1-5, 11, 12, and 15 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —